

Northwestern School Corporation

2010 6<sup>th</sup> Grade Science

Course Outline

Standard 1 – Nature of Science and Technology

- A. Scientific View of the World
- B. Scientific Inquiry
- C. Scientific Enterprise
- D. Technology and Science

Standard 2 – Scientific Thinking

- A. Computation and Estimation
- B. Manipulation and Observation
- C. Communication Skills
- D. Critical Response Skills

Standard 3 – The Physical Setting

- A. The Universe
- B. Earth and the Processes That Shape It
- C. Matter and Energy
- D. Forces of Nature

Standard 4 – The Living Environment

- A. Diversity of Life
- B. Interdependence of Life and Evolution
- C. Human Identity

Standard 5 – The Mathematical World

- A. Numbers
- B. Shapes and Symbolic Relationships
- C. Reasoning and Uncertainty

Standard 6 – Historical Perspectives

Standard 7 – Common Themes

- A. Systems

- B. Models and Scale
- C. Constancy and Change

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Scientific Method

The Scientific Method is used by researchers to find support or conflict a theory. It can be used to answer True/False questions only.

Step 1            Observation

One observes something in the material world, using your senses or machines which are basically extensions of those senses.

Step 2            Question

One asks a question about what you observe.

Step 3            Hypothesis

One predicts what one thinks the answer to the given Question might be.

Step 4            Procedure

One develops a way to test whether hypothesis is supported.. The outcome must be measurable (quantifiable)

Step 5            Data

One needs to use the information from the from the Procedure to create a supportive/non-supportive conclusion.

Step 6            Conclusion

One states whether the Hypothesis was supported or not. Discuss whether the experiment had variables that affected it negatively or what in the Procedure could have been changed for different results.